



Private adaptation strategies and implementation in flood risk management: why people do nothing?

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In the past decades, vulnerability assessment has emerged as an important field of research in flood risk management, in particular with respect to climate change and necessary adaptation strategies for the society. Probably starting with Chamber's seminal article on vulnerability, coping and policy (Chambers 1989), and further developed as the causal structure of vulnerability by Bohle (2001) and others, at least two research paradigms exist: an internal side focusing on societal resilience and coping capacities, and an external side targeted at a reduction of negative effects in terms of loss reduction (Fuchs 2009). Despite considerable research effects, however, different definitions and concepts still dominate the debate; it is surely that different scientific disciplines are working with this term: natural scientists, engineers, social scientists or economists, to name just a few. Each discipline defines vulnerability in a way which fits to their disciplinary purposes (Fuchs et al. 2011). But why has there been so little progress in our ability to adapt to flood hazards? White et al. (2001) summarised this paradox in an article with the title "Knowing better and losing even more – the use of knowledge in hazard management". One of the fundamental reasons for the lack of progress is the continuing separation of research on natural processes and socio-economic processes without considering interaction between these systems (Fuchs & Keiler 2013), as well as between scientific research results and the policy implementation (Medd & Marvin 2005). Moreover, as many studies were focused on the vulnerability of least developed societies to natural hazards (O'Brien et al. 2008), there is a particular lack in studies targeted at an implementation of existing adaptation frameworks at the level of highly-developed countries (Field et al. 2012; Scolobig et al. 2012). This gap results in a challenge for attempts to develop formal models into practical application and policy implementation.

This paper examines the private adaptation capacity and willingness in two different catchments in the Mediterranean. The catchments Evros and Rafina in Greece were affected by flood events during the past 20 years. However, even in case of extreme events, the vulnerability of the (social) system to stress is considerably low due to social networks, economic settings as well as institutional and political factors, and consequently the speed of return to the equilibrium steady state, defined as the prevailing livelihood conditions, is fast. In other words, even if the magnitude of a hazardous event is high, the vulnerability is considerably low due to multiple compensation mechanisms installed in the Greek society, ranging from spreading risk to a larger community to governmental compensation and private donation. Therefore, ex-post recovery following an event is well-organised, and the initial systems state is re-established immediately or with only little delay. Therefore, affected citizens simply do not care much about being affected by floods, will be able to prevent those damages. There are no incentives for the affected population to react pro-active by e.g. investing in local structural protection or any other management strategy.

Key words: vulnerability; private adaptation; structural protection; risk management; floods; Greece

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